AMENDMENTS TO THE SPECIFICATION:

Amend the specification as follows:

Replace the paragraph beginning at page 1, line 15, with the following rewritten paragraph:

In a frequency band around a millimeter wave, a circuit using a waveguide, namely, a

microwave transmission circuit is often used. Generally, the waveguide can be made small in

sectional size with increase of the frequency, on a base of based on ½ wavelength as a standard.

Further, it is known that it is possible to make the size inside the waveguide small to a size of as

small as $\varepsilon_r^{-1/2}$ times by filling a space of the cavity inside the waveguide with a dielectric substance,

thus making it a small size. This is called a dielectric waveguide circuit (The basis of microwave

circuit and the application thereof p239-243, by Yoshihiro Konishi, published by Sogo Denshi

Shuppan, in 1990). Here, ε , indicates a relative dielectric constant of the dielectric substance.

Replace the paragraph beginning at page 2, line 3, with the following rewritten paragraph:

In application of these waveguides to a transmission line, a resonator, and so on, signal

energy loss in the electromagnetic field causes a problem. Energy loss in an electric conductor and

a dielectric material is predominant in the lose loss described above. Loss in a conductor increases

as surface resistance increases, and loss in a dielectric material increases as dielectric loss (tan δ)

increases.

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Replace the paragraph beginning at page 2, line 17, with the following rewritten paragraph:

On the other hand, it is known that on the surface of a MgO single crystal (001) (since it is

a cubic crystal system, the faces (001), (010), and (100) have substantially the same physical

properties), a copper oxide superconducting film being in a strong c-axis crystal orientation is

obtained by a plurality of methods such as a sputtering process, a pulse laser deposition (PLD)

process and so on. As a method of depositing film, a method can be cited in which the film is

deposited under high temperatures of about 600 to 800°C on a substrate in a reduced oxygen

atmosphere. It is known that the c-axis oriented film it is easy to pass a superconductive current

along the film surface direction of a c-axis oriented film under a low temperature of the critical

temperature Tc or less, compared with an a-axis oriented film. The critical temperature Tc of the

copper oxide super conductor is known to be several ten K tens of Kelvins or more, depending on

the material.

Replace the paragraph beginning at page 3, line 8, with the following rewritten paragraph:

A waveguide circuit is generally easy to be easily made low-loss but easy to become easily

becomes large in size compared with a planar type circuit such as a microstrip line type, a coplanar

type, and so on.

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Replace the paragraph beginning at page 6, line 9, with the following rewritten paragraph:

Fixtures 103 and 106 are made of brass and are used to fix (bond) the MgO block 101 on

which the copper oxide superconducting film 104 is formed, via indium layers 102 and 107

respectively. A pedestal 108 is a brass plate for fixing the MgO block 101 on which the copper

oxide superconducting film 104 is formed. The fixtures 103, 106 are fixed on the pedestal 108 at

each two places with screws of M1.2, that is, metric screws having a threaded portion with nominal

diameters of 1.2 mm. Through this step, the MgO block 101 on which the copper oxide

superconducting film 104 is formed is fixed mechanically on the pedestal 108. The MgO block 101

and the brass members (the fixtures 103, 106 and the pedestal 108) are different in thermal expansion

coefficient from each other. Indium layers 102 and 107 which lie between the MgO block and the

brass members serve as a buffer to absorb the above-described differences of the thermal expansion

coefficient.

Please amend the paragraph beginning at page 10, line 14, with the following rewritten

paragraph:

Fixtures 133 and 136 are bonded directly to the copper oxide superconducting film 104. A

pedestal 138 is also bonded directly to the copper oxide superconducting film 104. The thermal

expansion coefficient of materials used in the fixtures 133, 136 and the pedestal 138 is close to that

of the MgO block 101, and the material of the fixtures and the pedestal are Kovar KOVAR, Invar,

sintered magnesium oxide, stabilized zirconia, partially stabilized zirconia, and so on. Further, as

material for the fixtures 133, 136 and the pedestal 138, polytetrafluoroethylene (PTFE), ethylene

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tetrafluoroethylene (ETFE) and the like can be used, which are deformable at a temperature of 100

K or less.

Replace the paragraph beginning at page 11, line 1, with the following rewritten paragraph:

As described above, the fixtures 133, 136 and the pedestal 138 are used for fixing the MgO

block 101 on which the copper oxide superconducting film 104 is formed, and a portion to make

close contact directly with the copper oxide superconducting film 104 is preferably comprised of any

one or more kinds of Fe-Ni-based alloys with low thermal coefficient for a metal, such as Kovar

KOVAR, Invar and the like which have rather a low thermal expansion coefficient for a metal,

sintered magnesium oxide, stabilized zirconia, partially stabilized zirconia, and PTFE, ETFE which

are deformable even at 100 K or less.

Replace the paragraph beginning at page 11, line 13, with the following rewritten paragraph:

Fig. 4 shows a dielectric waveguide having a 45° bent structure according to the third

embodiment of the present invention. The dielectric waveguide has a transmission line having a 45°

bent structure including a portion bent at a right angle. A single crystal MgO block 201 is a

rectangular parallelepiped parallelepiped block which is bent at a right angle, and has a face of 45

degrees bent to the XY face and YZ face, and 90 degrees bent to the XZ face. Hereinafter, this face

is called a 45 degrees bent face. In the surfaces of the MgO block 201, each face of the XY face, XZ

face and YZ face is any crystal orientation face among (100), (010) or (001). The 45 degrees bent

faces are crystal orientation faces (011), (101) or (110).

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Replace the paragraph beginning at page 11, line 27, with the following rewritten paragraph:

In the MgO block 201 surfaces, copper oxide superconducting films 203 are formed on the XY face, XZ face and YZ face excepting except for an input port face and an output port face. Main component of the copper oxide superconducting film 203 is a Y-Ba-Cu-O series substance consisting

of YBa₂Cu₃O_x (x=6.8 to 7.0), and the copper oxide superconducting film 203 is formed to have a c-axis crystal orientation perpendicular to the face of the MgO block 201. The thickness of the copper

oxide superconducting film 203 is, for instance, about 0.6 μm.

Replace the paragraph beginning at page 17, line 1, with the following rewritten paragraph:

The above-described copper oxide superconducting film is preferably an oxide high-temperature superconductor composed of any one kind or more showing the crystal structure anisotropy of Bin1Srn2Can3Cun4On5 $Bi_{n1}Sr_{n2}Ca_{n3}Cu_{n4}O_{n5}$ (1.8 \le n1 \le 2.2, 1.8 \le n2 \le 2.2, 0.9 \le n3 \le .2, 1.8 \le n4 \le 2.2, 7.8 \le n5 \le 8.4), Pbk1Bik2Srk3Cak4Cuk5Ok6 $Pb_{k1}Bi_{k2}Sr_{k3}Ca_{k4}Cu_{k5}O_{k6}$ (1.8 \le k1+k2 \le 2.2, 0 \le k1 \le 0.6, 1.8 \le k3 \le 2.2, 1.8 \le k4 \le 2.2, 1.8 \le k5 \le 2.2, 9.5 \le k6 \le 10.8), Ym1Bam2Cum3Om4 $Y_{m1}Ba_{m2}Cu_{m3}O_{m4}$ (0.5 \le m1 \le 1.2,1.8 \le m2 \le 2.2, 2.5 \le m3 \le 3.5, 6.6 \le m4 \le 7.0), REp1Bap2Cup3Op4 $RE_{p1}Ba_{p2}Cu_{p3}O_{p4}$ (RE: consisting of any of La, Nd, Sm, Eu, Gd, Dy, Ho, Er, Tm, Yb, Lu among rareearth elements, 0.5 \le m1 \le 1.2, 1.8 \le m2 \le 2.2, 2.5 \le m3 \le 3.5, 6.6 \le m4 \le 7.0).